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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,715	10/12/2001	David S. Allison	16159.098001;P5944	3306

32615 7590 04/09/2007
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HOUSTON, TX 77010

EXAMINER

ZHEN, LI B

ART UNIT	PAPER NUMBER
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2194

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/977,715

Applicant(s)

ALLISON, DAVID S.

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☒ **WILLIAM THOMSON**
SUPERVISORY PATENT EXAMINER
Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 23 – 36 are pending in the current application.

Response to Amendment

2. The declaration filed on 01/04/2007 under 37 CFR 1.131 is sufficient to overcome the U.S. Patent No. 6,615,217 (Rosensteel) reference; therefore, the finality of the previous office action is withdrawn and prosecution is hereby reopened.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 23 – 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,470,346 to Morwood [hereinafter Morwood] in view of U.S. Patent No. 6,842,898 to Carlson et al. [hereinafter Carlson, cited in the previous action].**

5. As to claim 23, Morwood teaches the invention substantially including a method for communicating between threads [col. 3, lines 1 – 7], comprising:

invoking a first thread [client process 12' includes an application layer 41a and an infrastructure layer 41b; col. 9, lines 28 – 42];

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associating a first input stream [inputfile from the client 12; col. 14, lines 15 – 54] and a first output stream with the first thread [Stdout and Stderr output streams; col. 14, lines 9 – 37];

invoking a second thread [invokes ManagerImplProcessingThread 106 which creates a thread; col. 11, lines 13 – 28];

associating a second input stream [input files for the ComputationImpl object 104; col. 13, lines 47 – 64] and a second output stream with the second thread [ComputationImpl has at least two DataSources--one each for Stdout and Stderr; col. 13, lines 47 – 64]; and

writing a first data value to the second thread using the first output stream and the second input stream [StdinInputArg is also used to pass a string from the client to the executable; col. 5, lines 4 – 19], wherein at least one selected from the group consisting of the first thread and the second thread manages an operating system process [manager process 26; col. 2, lines 47 – 67]. Although Morwood teaches the invention substantially, Morwood does not specifically teach the threads comprise a program counter, a stack, a state, and a register set.

However, Carlson teaches communication between threads [col. 4, line 63 - col. 5, line 5] and the threads comprising a program counter [a thread typically includes a program counter; col. 4, lines 42 – 64], a stack [stack; col. 4, lines 42 – 64], a state [thread can have one of several states; col. 4, lines 42 – 64], and a register set [register set; col. 4, lines 42 – 64].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Carlson and Morwood because Carlson's teachings provide a method and apparatus for handling call backs on system events for a collection of related threads [col. 4, lines 42 - 64 of Carlson].

6. As to claim 24, Morwood teaches writing the first data value comprises using an operator associated with at least one selected from the group consisting of the first output stream [Stdout and Stderr output streams; col. 14, lines 9 – 37] and the second input stream [input files for the ComputationImpl object 104; col. 13, lines 47 – 64].

7. As to claim 25, Morwood teaches using the second thread to generate a second data value by performing an operation on the first data value [col. 13, lines 47 – 64]; and reading the second data value from the second thread using the second output stream and the first input stream [col. 9, lines 51 – 56].

8. As to claim 26, Morwood teaches the second thread is a child thread of the first thread [col. 8, lines 48 – 60].

9. As to claim 27, Morwood teaches at least one selected from the group consisting of the first input stream [col. 14, lines 15 – 54], the first output stream [col. 14, lines 9 – 37], the second input stream [col. 13, lines 47 – 64], and the second output stream is a standard stream [col. 13, lines 47 – 64].

10. As to claim 28, Morwood teaches the standard stream is directly built into a dynamically typed programming language [col. 3, lines 17 – 27].

11. As to claim 29, Morwood teaches associating a first error stream with the first thread [col. 10, line 65 – col. 11, line 15].

12. As to claims 30 – 36, these are product claims that correspond to method claims 23 – 29; see the rejections to claims 23 – 29 above, which also meet these product claims.

CONTACT INFORMATION

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Li B. Zhen
Examiner
Art Unit 2194

LBZ


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER